Project No.: 03.14.859.054

Client: United States Army Corps of Engineers

Project: Beltway 8 PA Lab Testing
Contract No. DACW64-03-D-0008, Delivery Order No. 0054

Boring No.	Sample No.	Soil Description	USCS	Water Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plast. Index	Finer than #200 Sieve (%)	Uc/UU. Compr. (tsf)	Cell Press. (psi)	Failure Strain (%)	Failure Type
	6	Gray and tan FAT CLAY; traces of ferrous nodules	CH	28.3									
	7	Tan and light gray FAT CLAY, slickensided	CH	30.4	92.1	80	29	51	99.5	1.75	29	1.9	Slickensided
6-14													
	2	Gray and brown LEAN CLAY; roots and traces of ferrous nodules	CL	14.8									
	4	Tan and gray LEAN CLAY with SAND; traces of calcareous and ferrous nodules	CL	15.4	115.2	42	18	24	81.5	5.48	23	7.1	Bulge/vert. shear
	6	Gray and tan FAT CLAY; traces of ferrous and calcareous nodules	CH	24.1		73	25	48					
6-15													
	1	Gray and tan FAT CLAY; sand partings and few ferrous nodules	CH	18.2									
	2	Gray and tan FAT CLAY; few ferrous nodules and roots	CH	23.3									
	3	Gray and tan FAT CLAY; traces of ferrous nodules	CH	22.6		57	19	38	87.6				
	4	Gray and tan FAT CLAY; traces of calcareous and ferrous	CH	20.8									
	5	Gray and reddish-brown FAT CLAY; traces of ferrous and calcareous nodules	CH	22.4									
	6	Gray and tan FAT CLAY; traces of ferrous and calcareous nodules	CH	31.8									
	7	Gray and tan FAT CLAY; traces of ferrous and calcareous nodules	CH	29.6									
	8	Gray and tan FAT CLAY; traces of ferrous nodules	CH	29.5									
06-16													
	2	Gray and tan FAT CLAY; traces of ferrous nodules	CH	30.8									
	4	Light gray and tan LEAN CLAY with sand; traces of ferrous nodules	CL	15.4		31	18	13	73.8				
	6	Gray and tan FAT CLAY; traces of ferrous and calcareous nodules	CH	28.6									
06-17													
	1	Gray and reddish brown SANDY LEAN CLAY; sand partings and traces of ferrous nodules	CH	14.4									
	2	Gray and tan SANDY LEAN CLAY; traces of ferrous nodules	CL	15.4									
	3	Gray and tan LEAN CLAY with SAND; traces of ferrous nodules	CL	18.6		39	17	22	72.7				
	4	Gray and tan SANDY FAT CLAY; few ferrous nodules	CH	22.1									
	5	Gray and tan FAT CLAY; sand seams, little calcareous nodules and traces of ferrous nodules	CH	23.7									
	6	Gray and tan FAT CLAY; little calcareous nodules and traces of ferrous nodules	CH	25.9									

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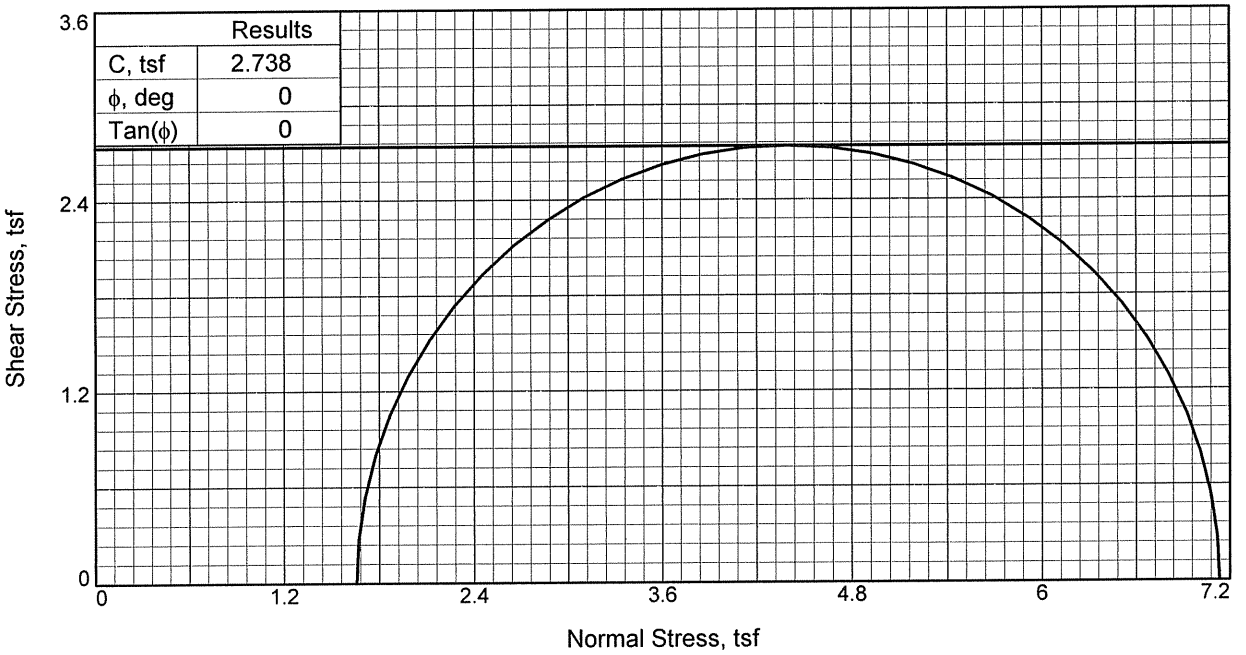

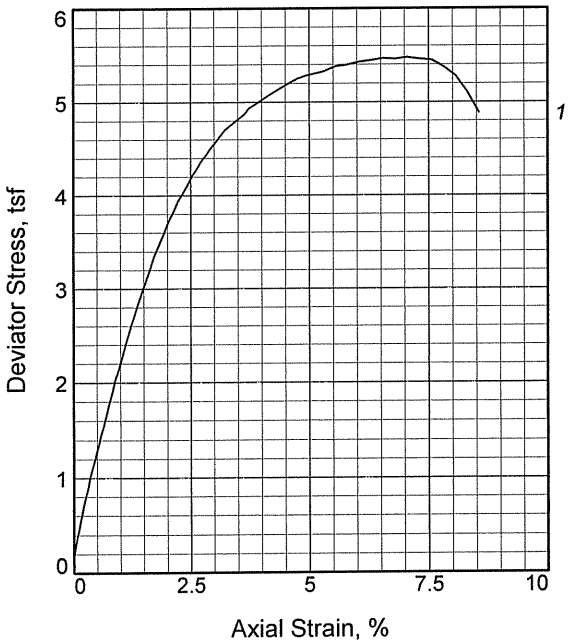

Sample No.		1
Initial	Water Content, %	15.4
	Dry Density, pcf	115.1
	Saturation, %	89.8
	Void Ratio	0.4643
	Diameter, in.	2.86
	Height, in.	5.93
At Test	Water Content, %	15.4
	Dry Density, pcf	115.1
	Saturation, %	89.8
	Void Ratio	0.4643
	Diameter, in.	2.86
	Height, in.	5.93
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		23.00
Fail. Stress, tsf		5.48
Strain, %		7.1
Ult. Stress, tsf		4.88
Strain, %		
σ_1 Failure, tsf		7.13
σ_3 Failure, tsf		1.66

Type of Test:
Unconsolidated Undrained

Sample Type: Undisturbed

Description: Tan and gray LEAN CLAY with SAND; traces of calcareous and ferrous nodules

LL= 42 **PL=** 18 **PI=** 24

Assumed Specific Gravity= 2.70

Remarks:
Failure Type: Bulge/vertical shear
Test Method: ASTM D 2850

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Source of Sample: 06-14

Sample Number: 4

Proj. No.: 03.14.859.054 **Date Sampled:** 10/5/06

TRIAXIAL SHEAR TEST REPORT

Tolunay-Wong Engineers, Inc.